

xxxv. p. 174) hardly merit the rank, with the exception of *Gnathias*, which certainly has an excellent distinctive structural character in the bidentate mandibles.

Robertson considers *N. annulata*, Sm., ♂ (nec ♀), to be synonymous with *Nomada* (*Centrias*) *americana*, K. (Trans. Amer. Ent. Soc. xxii. p. 125). The male of Smith's species certainly has the characters of *Centrias* as defined by Robertson (*l. c.*), but there appears to be no reason to doubt that Smith had correctly associated the sexes, and *N. annulata* ♀ is certainly not a *Centrias* as defined (*l. c.*).

Nomada vinnula, Cress.

Nomada vinnula, Cresson, Trans. Amer. Ent. Soc. vii. p. 202 (1879).
♀ ♂.

Nomada interceptor, Smith, Descr. New Spec. Hymen. p. 100 (1879).
♂.

Smith's type, from Vancouver, agrees with a male labelled "*N. vinula*" by Cockerell. Cresson's species has priority by a few months. The spelling of the specific names is that employed by the authors respectively, but they appear in literature as "*vinula*" and "*intercepta*."

XV.—*Descriptions and Records of Bees.*—LIII.

By T. D. A. COCKERELL, University of Colorado.

Megachile heliophila, sp. n.

♂.—Length about 10 mm., expanse 20.

Black; rather robust, but parallel-sided; head rather large, the cheeks and vertex very broad; clypeus densely and strongly punctured, but shining between the punctures, wholly without any median smooth or raised line, the lower margin slightly undulate, obscurely subemarginate in middle; mandibles broad and stout, the third tooth remote from the second, the apical part not covered with hair; from beneath the lower edge of clypeus, and from lower edge of mandibles, comes bright ferruginous hair, and there is a tuft of long hair of the same colour on the end of the labrum; antennæ entirely black; vertex closely and finely punctured; hair of head and thorax long and loose, mostly white, but brownish on clypeus, black on vertex and disc of mesothorax, and much long black hair mixed with the pale on scutellum; mesothorax and scutellum very minutely

and densely punctured, but the margins of the punctures shining; tegulae black, minutely punctured. Wings dusky; second submarginal cell very long. Legs black, with white hair; middle and hind spurs black, but spurs of anterior tibiae red; anterior femora with the upper side concave in profile. Abdomen closely and finely punctured (not so closely on disc of fourth segment); long erect white hair on first segment and base of second, not hiding the surface; second beyond base, and third and fourth, with short fuscous hair; a white marginal hair-patch on each side of first segment, and white hair-bands, weak in middle, on second and third; greater part of fifth segment, and all of sixth, covered with appressed golden hair; ventral scopa white.

Hab. Sunnybank, Queensland, Sept. 12, 1911 (*H. Hacker*). Queensl. Mus., 9.

Rather like *M. remotula*, Ckll., but larger, the clypeus differently formed, the flagellum not red beneath, &c. It may also be compared with *M. oblonga*, Sm., but differs by the dusky wings, the tuft of red hair on labrum, &c.

Sphecodes thoracicus, Ashmead.

St. Vincent. I recently examined the type of this species in the U.S. National Museum. It is a slender bee with peculiar coloration and a very large stigma. It appears to represent a distinct genus.

Halictus auratus, Ashmead.

St. Vincent. I have examined the type in the U.S. National Museum. The colours resemble those of *Augochlora*, but the inner orbits are as in *Halictus*. The face and front are suffused with copper-red.

Halictus indistinctus, Crawford.

Costa Rica. I examined the ♀ type in the U.S. National Museum. The mesothorax is dull, only faintly green, abruptly contrasting with the shining anterior border of scutellum. The area of metathorax has about the basal two-fifths plicatulate.

Andrena pecosana, sp. n.

♀.—Length about 12 mm.

Black, with greyish-white hair, dense and lively pale ochreous on vertex and thorax above; head broad; facial foveae broad, filling more than half the space between

antennæ and eyes, seen from above very pale yellowish, not widely separated from eye, extending downwards to about level of top of clypeus; third antennal joint nearly as long as the following three together; disc of clypeus shining, sparsely punctured, marginal parts dullish and more closely and finely punctured; malar space linear; process of labrum strongly bifid; tongue remarkably short; mesothorax microscopically tessellate, dull, with sparse very feeble punctures; area of metathorax triangular, granular; tegulæ rufotestaceous. Wings hyaline, with a very faint brownish tinge, the nervures and small stigma ferruginous; second s.m. broad, receiving first r. n. at middle or beyond. Legs with pale hair, light orange-ferruginous on inner side of basitarsi; small joints of tarsi ferruginous. Abdomen dull, with excessively minute punctures; hind margins of segments with very broad heavy entire ochreous-whitish hair-bands; caudal fringe pale reddish.

Hab. Pecos, New Mexico, August 31 (*Cockerell*).

Resembles *A. granicheri*, Ckll., and *A. mentzelia*, Ckll., especially the former, from which it differs by the bifid process of labrum and the heavily banded abdomen.

Hypanthidium panamense, sp. n.

♀.—Length about $7\frac{1}{2}$ mm.

Robust; head and thorax black and bright chrome-yellow, with the dorsal pubescence orange-fulvous; abdomen and legs clear ferruginous and yellow, without black; head and thorax above very densely punctured; punctures of mesopleura very large, posteriorly there is a smooth shining impunctate area; head yellow, with the following parts black: occiput and posterior part of cheeks, labrum, large quadrate frontal patch enclosing the ocelli and sending a band on each side to top of eye, having also three bands projecting from its lower border, one to each antenna, and one to middle of supra-clypeal area, a spot at each lower corner of supra-clypeal area; clypeus entirely yellow, except the ferruginous anterior edge; mandibles broad, with only two small teeth, cutting-edge black, behind this suffusedly reddish, and basal part of mandibles yellow; malar space obsolete; antennæ clear ferruginous, the scape yellow in front; thorax black, with the following parts yellow: large patch occupying nearly all mesopleura, large part of tubercles, rather narrow anterior (except in middle) and lateral borders of mesothorax (but no discal stripes), axillæ and the broad hind margin of the prominent, shallowly emarginate scutellum; base of metathorax with a series of large deep pits; tegulæ

ferruginous, darkest in middle. Wings dusky, strongly so in costal region; second r. n. going as far beyond second t.-c. as first beyond first t.-c. Legs red and yellow, with orange-fulvous hair, the yellow on under side of femora and on basitarsi; no pulvilli. Abdomen shining, punctured, the punctures much larger on the basal than apical part of segments; first, third, fourth, and fifth segments with entire yellow bands, second with a yellow patch on each side, apical segment yellow with a ferruginous mark on each side; ventral scopa light fulvous.

Hab. Gatun, Canal Zone, Panama (A. H. Jennings). U.S. National Museum.

Nearest to *H. aureocinctum*, Ckll., but mesothorax without discal stripes and abdomen without black. Also related to *H. elegantulum* (Smith), but antennæ and abdomen differently coloured.

Hypanthidium ecuadorium (Friese).

♂.—Length about $8\frac{1}{2}$ mm.

General form and appearance of *H. flavomarginatum* (Sm.); head and thorax black and yellow (a sort of dilute orange); the yellow parts of the head are the clypeus (except fuscous lower edge), a broad supraclypeal band presenting two angulations above (the inner side of each bounding the antennal socket), broad lateral marks ending in a point at level of lower side of anterior ocellus, a band across hind part of vertex and extending halfway down checks, and most of outer surface of mandibles; front, vertex, and mesothorax extremely densely punctured; antennæ reddish, the scape yellowish in front near apex and with a large black mark on inner side; flagellum, except basally, strongly suffused with dusky; sides of metathorax with a narrow yellow band which curves around in front, but is very broadly interrupted in middle; axillæ and scutellum (except a broad basal triangle) yellow; metathorax with rather small, irregular basal pits, and a large smooth excavated space on each side; tubercles largely yellow; pleura black; tegulæ large, light ferruginous. Wings fuliginous, especially in costal region; second r. n. going as far beyond second t.-c. as first beyond first t.-c. Legs variegated, blackened basally, the femora with a red streak above, and the anterior and middle ones with a shorter apical yellowish streak behind; tibiæ reddish and blackish, the hind ones darkest; tarsi dark, with white hair on outer side, anterior tarsi with a long silky white fringe behind. Abdomen shining and quite sparsely punctured, black, the hind margins of the

segments broadly dark reddish brown; yellow markings on abdomen as follows: on first segment a pair of very large pyriform patches, pointing mesad, and not reaching subdorsal region, on third to sixth a broad entire band; apical segment broadly rounded, black with a submarginal yellow band, outside of which the margin is translucent; disc of seventh segment subearinate, shining, with large sparse punctures.

♀.—Similar to the male, except as follows: mandibles entirely black; clypeus black, except the narrowly yellow upper lateral margins; a yellow dot on supra-clypeal area; lateral face-marks ending obtusely above, and below squarely truncate at about level of upper end of clypeus; femora without a yellow mark behind; ventral scopa white.

Hab. Guayaquil, Ecuador (*c. Buchwald*). Alfken collection, 10.

Very similar to *H. flavomarginatum*, but the face-markings of the male are quite different, and there is no pit on the seventh abdominal segments. This does seem to agree quite perfectly with Friese's too brief account of his *Anthidium flavomarginatum*, var. *ecuadorium*, but his specimens were taken by the same collector at the same place and are doubtless conspecific.

Dianthidium macrurum, sp. n.

♂.—Length 15 mm. or rather more, if the abdomen were held straight; anterior wing $10\frac{1}{2}$ mm.

Red and yellow, with little black; head and thorax extremely densely punctured above, the mesothorax dull, but the pleura with larger, separated (though close) punctures, the surface between them shining; hair of head and thorax fulvous dorsally, paler beneath, pale around the very strongly keeled tubercles; vertex, cheeks, and sides of front rather narrowly ferruginous; front except sides black, this enclosing ocelli; area between antennæ red, but a black band below antennæ, but the lower part of the supra-clypeal area red; clypeus and sides of face yellow, the upper half of the clypeus suffusedly reddened; mandibles yellow with the apex and cutting-edge black, only two well-formed teeth; labrum black; antennæ red, with the apical half or more of flagellum black; thorax red, the scutellum very bright, a good deal of black in region between metathorax and mesopleura, and metathorax narrowly black at sides of base; tegulæ large, red, closely and finely punctured. Wings dark reddish fuliginous; second r. n. going well beyond second

s.m. Legs bright ferruginous red, with the hind basitarsi yellow, and the others suffusedly more or less yellowish; pulvilli distinct. Abdomen rather long, tapering, red, with an angular yellow patch on each side of second segment, the third to fifth segments nearly all yellow except in middle and on extreme lateral margins, and a transverse red patch or band on the middle of the yellow on each side; seventh dorsal segment obtusely angular at sides, and in middle produced into a very long bent finger-like process, the upper side of which is keeled; second ventral segment raised and angulate in middle of apical margin.

Hab. Federal District, Mexico (*J. R. Inda*, 21). U.S. National Museum.

A very distinct and remarkable species, kindly placed in my hands for description by Mr. J. C. Crawford. I know of no close relative; on account of the structure of the seventh abdominal segment it forms a section by itself.

Dianthidium bivittatum (Cresson).

Cresson described this in 1878 from two males collected in Mexico. The female, hitherto unknown, has been found at Livingston, Guatemala, May 11, by Messrs. Barber and Schwarz. It is like the male, but has the following special characters: clypeus black, its lower margin bidentate; hair of vertex and mesothorax all ochreous; mandibles massive, with a very long and oblique quadridentate inner edge, a large yellow spot on outer surface near base; yellow face-marks consisting of two bars, divergent above, between antennæ, and narrow stripes along the whole length of the inner orbits; yellow stripe of cheeks and occiput interrupted at level of top of eyes, and again (broadly) in middle; middle femora with a yellow band beneath and hind ones with a spot near apex; first two abdominal segments black with shining pile, the others mainly orange, the sixth broadly black apically; ventral scopa thin and short, glittering pure white. *D. nectarinioides* (Schrottky) is an allied South American species.

These insects curiously resemble certain Eumenid wasps.

Dianthidium (Anthidiellam) eiseni, sp. n.

♂.—Like *D. notatum* (Latr.), but the markings cream-colour; femora black with the knees reddish; dark parts of tibiæ reddish black, but anterior tibiæ light ferruginous in front; lateral face-marks hardly going above level of antennæ;

supraclypeal area with only the lower corners pale; axillæ black; wings clear hyaline basally; band on second abdominal segment (narrowly interrupted in middle) more slender.

Hab. San José del Cabo, Lower California. U.S. National Museum.

This is evidently from the same lot as those recorded by Fox, Proc. Calif. Acad. Sci. ser. 2, vol. v. p. 270, as a variety of *D. notatum*. A relative in California is *D. robertsoni*, Ckll., but that has differently formed and coloured markings.

Anthidium 22-punctatum, Friese.

♂ ♀. Guayaquil, Ecuador (*v. Buchwald*). Alfken collection, 9.

Friese's measurements are too small, unless applied to specimens with the abdomen contracted and turned downward. In my female the outer spots on the fifth abdominal segment are mere dots. The species belongs to *Anthidium*, s. str., and closely resembles various North-American species, from which it is readily known by the 5-dentate apex of male abdomen.

Agapostemon nasutus, Smith.

4 ♂. Guayaquil, Ecuador (*v. Buchwald*). Alfken collection, 13. These are quite typical.

Centris nigerrima (Spinola).

Chile. *Anthophora dimidiata*, Smith, is a synonym, as shown by a specimen in my possession, from F. Smith's collection.

Centris euphenax, sp. n.

♀.—Length about 15 mm.

Robust; head, thorax, and legs black; abdomen with the first three segments black with a very obscure bluish tint, the hind margin of the third reddish; remaining abdominal segments bright ferruginous red; clypeus shining, sparsely punctured at sides, cream-coloured except the broad lateral and upper margins (the cream-coloured area coming to a point above) and the linear brown lower edge; labrum cream-coloured except the narrow lateral and apical margins, its hair black; eyes moderately converging above; hair of whole insect entirely black, except on the red (apical) part

of the abdomen, where it is clear red. Wings rather dilute fuliginous, violaceous.

Hab. Pachacayo, Peru, over 12,000 ft., March 27 (*C. H. T. Townsend*).

A species of the same general type as *C. hæmorrhoidalis* (Fab.), but more robust, with the wings darker and the abdomen less blue. Superficially, it is exactly like the workers of *Bombus coccineus*, Friese, which were taken by Professor Townsend at the same time and place.

Bombus rufocinctus albertensis (Cockerell).

The following notes, additional to the original description, are taken from the type. Pile coarse, rather long, on abdomen much shorter than in *B. kirbyellus*; ocelli about as in *rufocinctus*, as also the deep sulcus in front of middle ocellus; corbicular fringe pure black; spinules of tarsal joints red; black interalar band eye-shaped, narrowing laterally. The following measurements are in microns:—antero-posterior diameter of middle ocellus 357; transverse diameter of a lateral ocellus 323; lateral ocellus distant from eye 595; middle ocellus to lateral ocellus 221; length of third antennal joint 595, of fourth 323, of fifth 357.

XVI.—*Description of a new Species of Agouti* (Myoprocta).

By R. I. POCKOCK, F.R.S.

Myoprocta pratti, sp. n.

General colour of upperside olive-green, owing to the pale yellow annulation of the black hairs. Dorsally the pale annuli are narrower than laterally, making the sides of the body lighter than the back. Ventrally the yellow annuli prevail over the black, so that the sides of the belly are pale yellow. Along the middle line of the belly there is a narrow but rather ill-defined white area, which spreads slightly between the hind legs and markedly between the fore legs on the chest, where it is set off both on the throat anteriorly and on the inner side of the limbs by bright nearly orange-yellow hairs. The anterior part of the throat behind the interramal area whitish, but the sides of the neck and the cheek covered with hairs banded with black and bright yellow. The top of the head, and especially the muzzle,